
TEMPORIZATION
OR
PROVISIONAL
RESTORATION

- DEFINITION
- PURPOSE
- REQUIREMENT
- IDEAL PROPERTIES OF MATERIALS
- CLASSIFICATION
- TECNIQUES OF FABRICATINB
- NEW MATERIALS

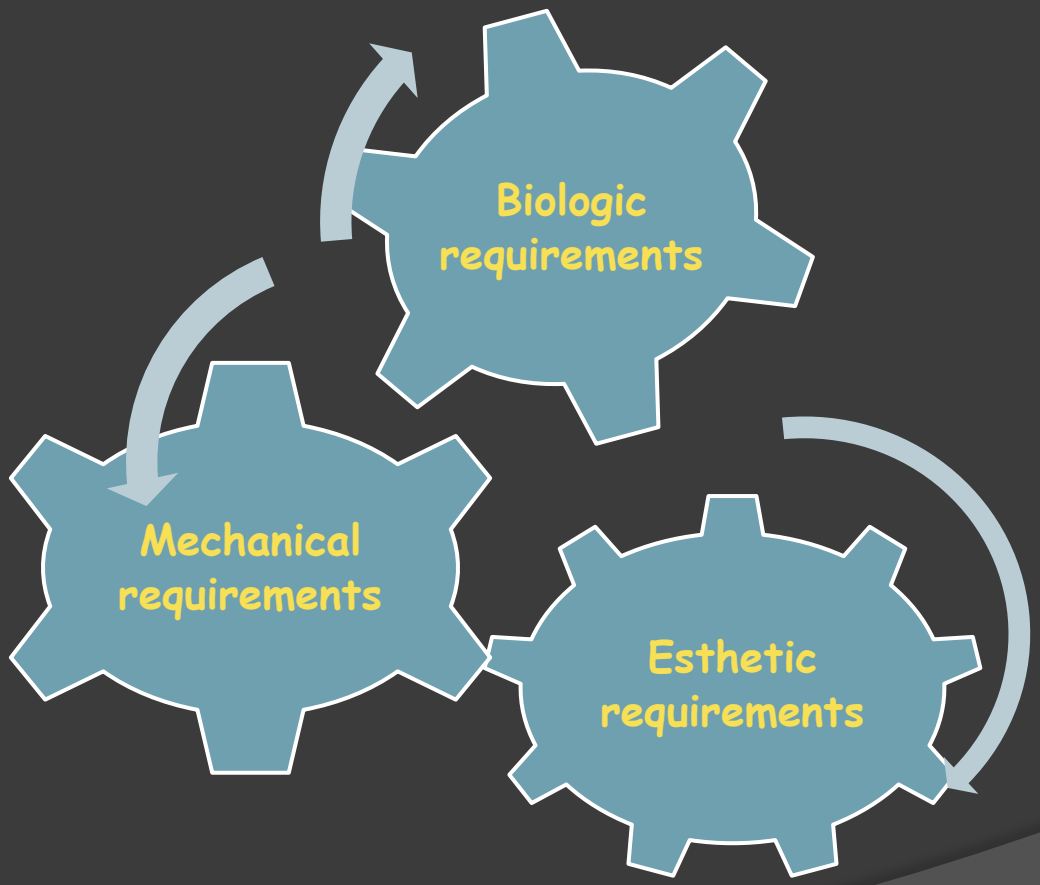
definition

- Provisional restorations are used in the interim between tooth preparation and fitting a definitive restoration
- Temporary = Provisional = Non-Permanent = 2-26 weeks:
- - Short-term = 2-6 weeks
- - Long-term = 6-26 weeks
- Temporary System = restorations + cement

Purpose of Provisional Coverage

- Reduces sensitivity and discomfort in the prepared tooth.
- Maintains the function and esthetics of the tooth.
- Protects the margins of the preparations.
- Prevents shifting of the adjacent or opposing teeth.

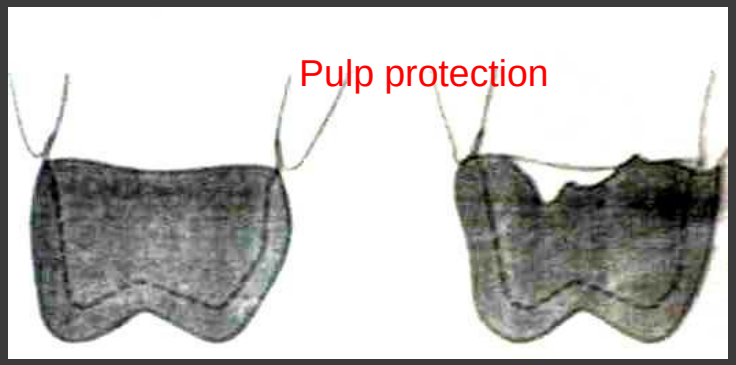
Basic Requirements of Provisional Restorations



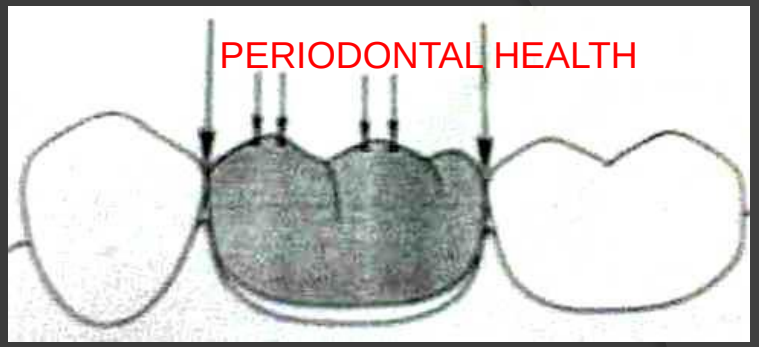
A. Biologic requirements

- Pulp protection
- Periodontal health
- Occlusal compatibility and tooth position
- Prevention of fracture

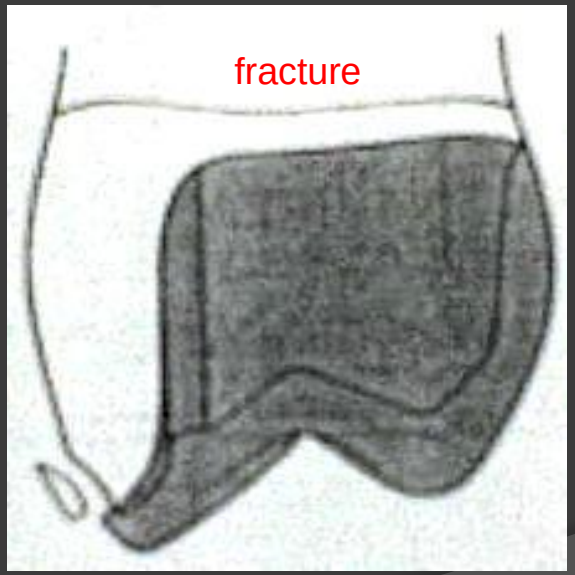
Pulp protection



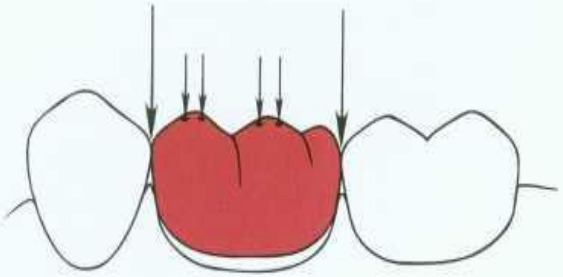
PERIODONTAL HEALTH



fracture



If a provisional does not ensure positional stability, tooth movement can occur, and additional treatment will be necessary.



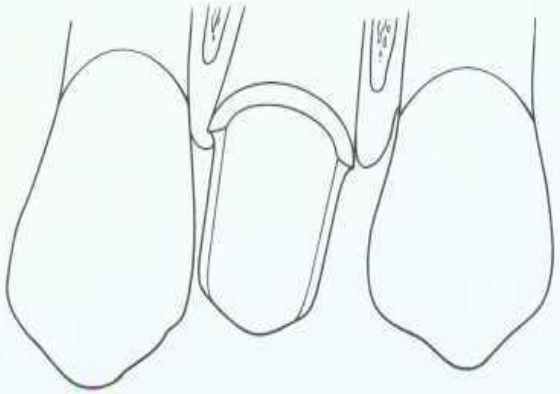
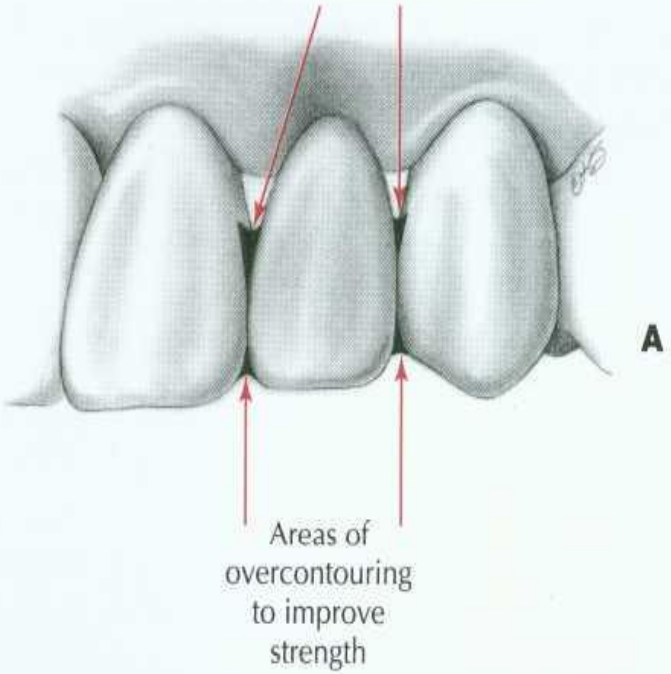
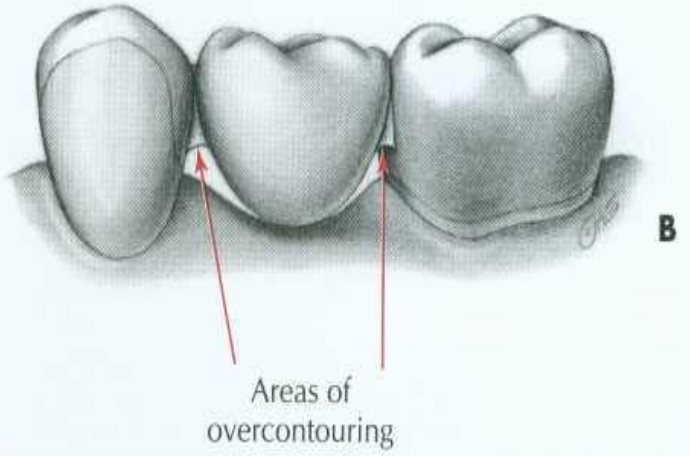


Fig. 15-4. Proper occlusal and proximal contacts promote patient comfort and maintain tooth position.





B. Mechanical requirements

Provisional restoration should

- Resist functional loads
- Resist removal forces
- Maintain interabutment alignment

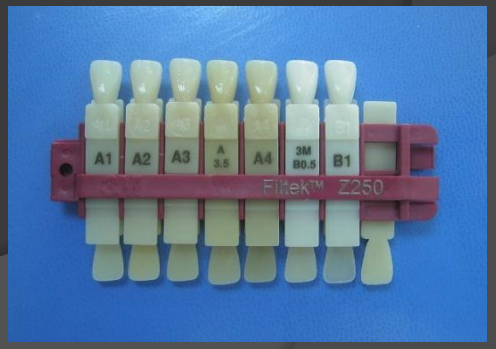


C. Esthetic requirements

Provisional restoration should

- Be easily contour able
- Be color compatible
- Be translucent
- Be color stable









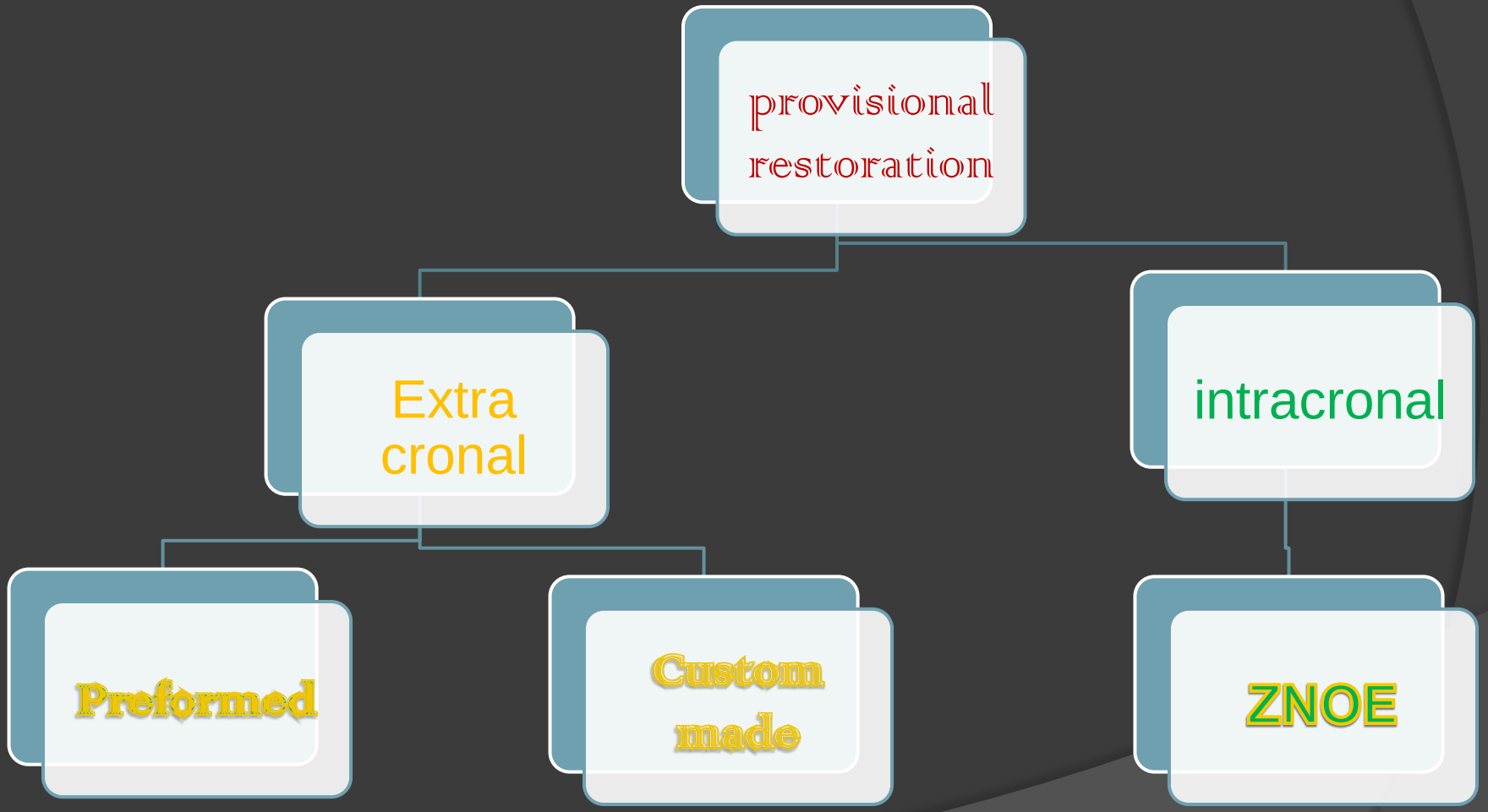
Provisional restorative materials

Ideal properties:

- Convenient handling
- Biocompatibility
- Dimensional stability during solidification
- Ease of contouring and polishing
- Adequate strength and abrasion resistance
- Esthetic
- Ease of adding and repairing



Classification of provisional restoration



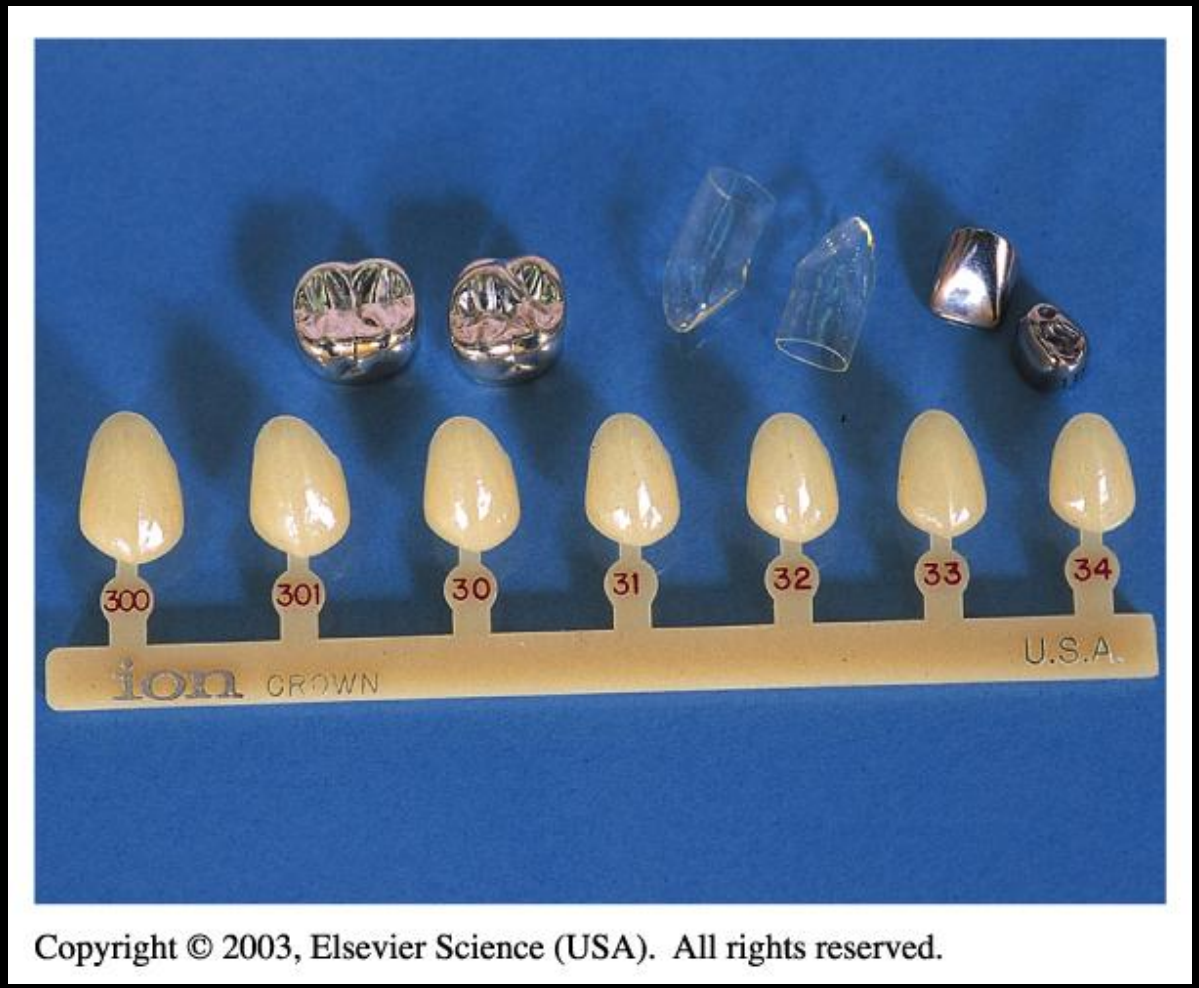
1- Preformed crowns

- come in a series of sizes but usually need considerable adjustment marginally, proximally and occlusally.

- are made from polycarbonate , Cellulose or acrylic, commonly used for anterior teeth including premolars.

- Metal shells may be made from (Al, Anodized Al, Sn-Ag, Stainless Steel, Ni-Cr))and are only used on posterior teeth.
- Both plastic and metal shells can be relined with self cured resin to improve their fit.

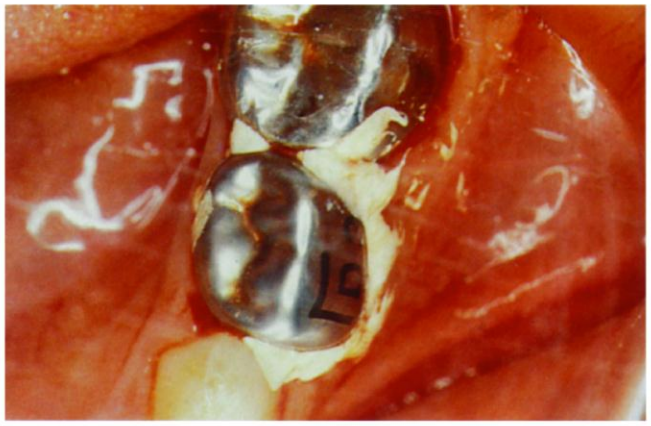
Fig. 51-1 Types of provisional coverage.



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Aluminum Crowns

- An aluminum crown is available in a range of sizes.
- The crown surface may be *anatomic* or *nonanatomic*.
- The crown is sized, contoured, and cemented in place.



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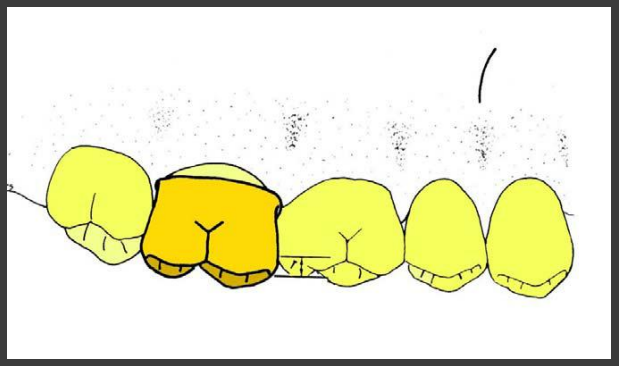


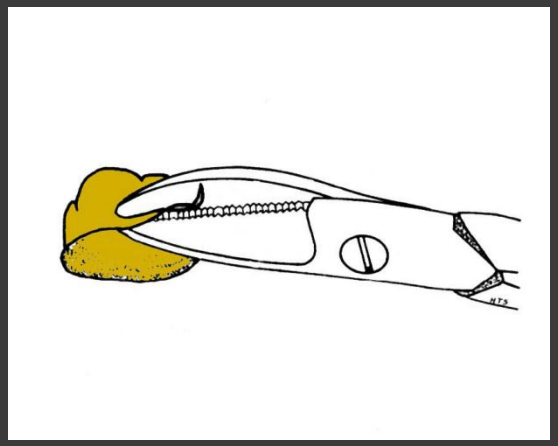


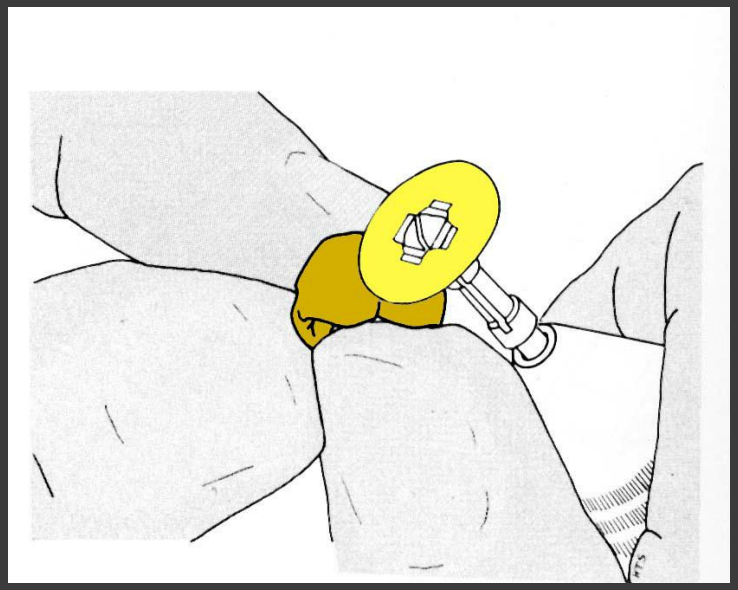


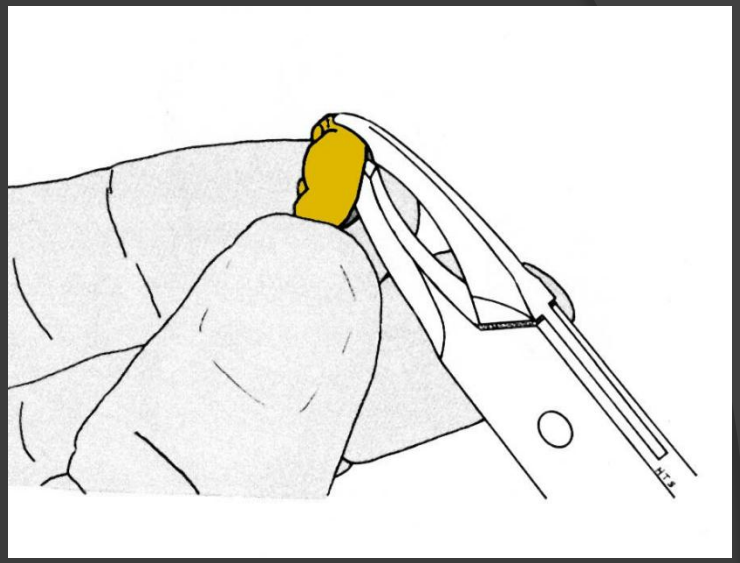


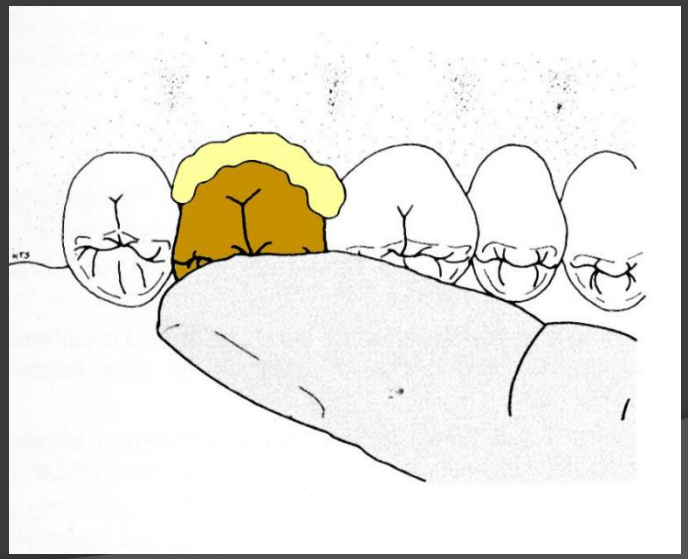












2-Custom made provisional restorations

- Materials used to fabricate provisional restorations can be classified as acrylics or resin composites. Subcategories are based on method of polymerization (e.g., chemically activated, light activated, dual activated).

Custom made provisional restorations

- ***Acrylics:***
- *Polymethyl Methacrylates*
- *Poly-R' Methacrylates (R' = ethyl, vinyl, isobutyl)*
- *Epimines*

- **Bis-Acryl Composites:**
- Chemically-Activated Composites
- Visible Light-Activated (VLA) Composites
- Dual-Activated Composites

Polymethyl Methacrylates:

Advantages	Disadvantages
+low cost +good wear resistance +good esthetics +high polishability +good color stability	-significant amount of heat given off by exothermic reaction -high degree of shrinkage (about 8%) -strong, objectionable odor -short working time -hard to repair -must be mixed -radiolucent

Poly-R' Methacrylates (R' = ethyl, vinyl, isobutyl)

Advantages	Disadvantages
- low cost - less heat given off during reaction than polymethyl methacrylates - less shrinkage than polymethyl methacrylates - extended working time	-less esthetic than other currently-marketed materials -poor wear resistance -poor color stability -strong, objectionable odor -hard to repair -must be mixed -radiolucent

Epimines

- these were the first two-paste acrylics, commercially introduced in 1968 as Scutan (ESPE). Although Scutan had relatively low shrinkage and heat production, it was weak and could not be altered or repaired.

Bis-Acryl Composites

Advantages	Disadvantages
+less shrinkage than acrylics +minimal heat generated during setting reaction +relatively high strength +minimal odor +excellent esthetics +most products use automix delivery +can be repaired or characterized using resin composite +easy to trim +good color stability +radiopaqu	-greater cost than acrylics -some do not have a rubbery stage -viscosity cannot be altered -sticky surface layer present after polymerization -may be more brittle than acrylics



Techniques of provisional restoration

A
- DIRECT

B
- IN DIRECT

C
- DIRECT-IN DIRECT





Matrices

- Acetate
- Silicone putty
- Alginate
- Baseplate wax

Direct Technique

- Impression of Diagnostic wax-up
- Matrix fabrication and shade selection
- Place material in matrix
- Air and water prevents pulp damage
- Removal and replacement offsets polymerization shrinkage
- Trim and polish with pumice

- **Direct procedure**

Disadvantages :

- Tissue trauma
- Risk of allergic reaction
- Poor marginal fit

- **Indirect procedure:**

An impression is made of the prepared teeth and is poured so the provisionals are fabricated outside the mouth





- **Indirect procedure**

Advantages:

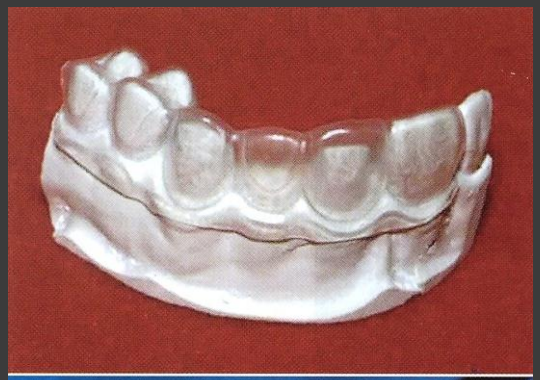
- no allergic sensitivity to the free monomer
- No heating of the tooth from the polymerisation of resin
- Better marginal fit due to continuous seating of the restoration while polymerisation

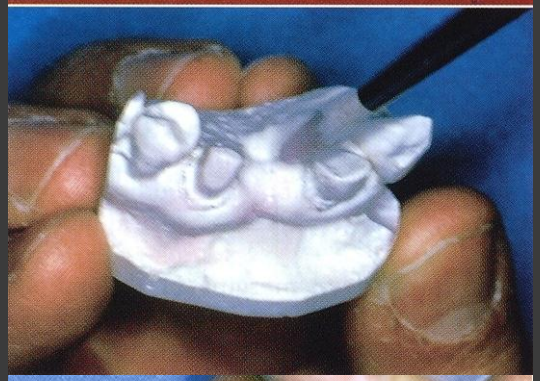
- **Indirect procedure:**

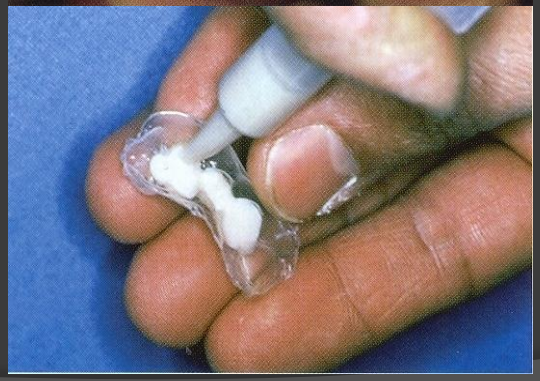




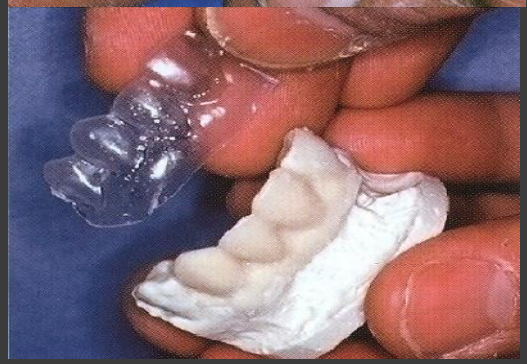














- **Indirect procedure:**







- **Indirect-direct procedure**

 the restoration is made on a conservatively prepared diagnostic casts prior to the preparation in the mouth. Then it's lined directly in the mouth.

Indirect-direct procedure

Advantages:

- Chairside time is reduced
- Less heat is generated
- Less allergic reaction








NEW MATERIALS

Protemp™ Crown Temporization Material Refill

- A preformed malleable crown that delivers a custom fit for your patients in less than four minutes.
- · Custom fit
- · Excellent strength
- · Natural-looking esthetics
- · Light curable
- · Low intra-oral heat during fitting process



Gold Anodized crowns

- made of medium-hard aluminum for short-term adult posterior use. Refills of individual crowns are available in boxes of five.
- Benefits:
- · Made from medium-hard aluminum for good durability.
- · Gold anodization minimizes metallic taste and galvanic shock.
- · Bicuspid and molar crown selection to cover adult posterior applications.
- · Crown set is packaged in a unique, stackable tray that provides convenient, easy storage.
-

Prefabricated, transparent strip crowns for primary anterior applications

- The strip crowns are ideal for use with chemical or light-cured composites. Refills of individual primary anterior strip crowns are available in boxes of five.
- Benefits:
- · Automatically contours restorative material to match natural dentition.
- · Strips off easily leaving a smooth surface.
- · Thin interproximal walls allow for tight contacts.
- · Provides sufficient strength for easy handling.
- · Ideal for use with chemical or light-cured composites.
- · Crown set is packaged in a unique, stackable tray that provides convenient, easy storage